LETTERS

Russia in Chechnya: A Second Look

Dear Sir:

CPT Geibel's recent article, "Some Russian Tankers' Experiences in the Second Chechen War" (*ARMOR,* July-August 2001), ultimately presents a fuzzy picture of the modern Russian Army, its capabilities, and its shortcomings. Since CPT Geibel does not speak or read Russian, he is at the mercy of what English-language materials are available, and most of those are sorely lacking a good assessment of what has taken place within the Russian Army over the last nine years.

To provide a better understanding for the readers of *ARMOR,* and so that they can place the events described by CPT Geibel in proper perspective, a short background on the history of the Russian Army is required, as well as the framework of how it fits into the events which have taken place in Chechnya.

In 1992, Russian military writers such as Colonel Anatoly Dokuchayev gave an outline of how the new Russian Army planned to fight in the future. Most forward thinkers saw the days of the Soviet "hordes" as over, and the main problem would then be "Local Wars and Regional Conflicts." To engage in these military engagements, the view was to cut the Army drastically from its Soviet days of over 200 divisions down to only around 50 or so. Most of the divisions were to be reorganized into brigades, with more artillery and support assets, and would fight under the direction of a corps or army headquarters (which had the command and control assets to run major operations). They were also to include, if necessary, forces from other branches of the armed forces (e.g., VDV, Naval Infantry, Frontal Aviation, etc.) and troops from the other 12 ministries that had military or paramilitary formations (MVD Internal Troops, Border Guards, Railway Troops, Ministry of Emergency Situations, etc.)

These formations were to fight as "*Gruppirovka*" – a Russian word which means "Force Grouping," but in the U.S. sense approximates a task force. Each *gruppirovka* would form "*Gruppa*" or battle groups that were tailored for specific missions, and would prosecute them as required. The gruppirovki would be commanded under an "*Ob'yedinyonnaya Gruppirovka*" headquarters, or what U.S. planners would call a joint task force. On paper, this seemed to be a modern and functional method of conducting combat, better suited for operations like Desert Storm than the ponderous WWII fronts which the Soviets planned to use.

Unfortunately, all this requires training — from the soldier skills at the bottom to the command employment at the top. This was not done, partially because the Russian Army suddenly found itself without a budget, and partially because the bureaucrats from the "Arbat Military District" — the General Staff — wanted no part of such changes. For two years, the Russians argued about these changes in their professional journals and writings. But in December 1994, when President Yeltsin ordered the crackdown on the Chechens, it was put to the test and found seriously wanting.

Part of the problem here was a lack of training at all levels. Troops who were sent to Chechnya had in many cases only just arrived for their mandatory conscription service. As a result, they had only been through about half of what U.S. soldiers would consider basic training. Since Russian planners wanted to conserve their "good stuff" — the 6,000 tanks that they considered to be combat worthy against the West — older models were pulled out of depot storage and issued to troops. As a result, few tankers were trained on any of the systems they would have to fight in, and even trained ones were assigned to the wrong tanks. Trained T-72 drivers wound up in T-80BV tanks, and T-80 tankers in T-72As. Crews were thrown together and had to train and become familiar with each other during the road march to Groznyy.

All of this was compounded by two major errors at the top. First off, all units assigned were kept on peacetime relationships, not wartime. Under wartime regulations, all troops in a given area belonged to the designated commander. Under peacetime, they still were responsible to their own chains of command. This was true with the VDV units sent into the country, as well as the MVD Internal Troops units, which comprised some 40 percent of the original troops deploying (15,000 out of 38,000).

Secondly, the North Caucasus Military District commander organized the operation as a classic Soviet front, with too many levels of command for the forces deployed. The result was an unmitigated disaster, highlighted by the nearly complete destruction of the 131st Independent "Maykop" Motorized Rifle Brigade and the 81st Guards Motorized Rifle Regiment on New Year's Eve 1994-95.

Most of CPT Geibel's anecdotes on failings apply to this war, not the current one. The Soviets had a very good system of long-term conservation and storage, but it relied on skilled depot-level preparation and storage of equipment to work properly. This is why in 1991 Lieutenant General Dmitry Volkogonov noted that the Soviet Union, at the moment of its breakup, had 77,000 tanks on its books, albeit in various states of operational service or repair. In the breakup, most of the restoration factories — charged with the depot-level rebuilding and some of the storage work — were lost to Belarus and Ukraine. As skilled personnel left in the drawdown, many vehicles had to be stored by use of troop labor. These personnel were untrained in proper preparation of vehicles, and as a result, when the tanks were drawn out of storage, many of them failed nearly at once. Colonel General Sergey Mayev, head of the Tank and Automotive Directorate of the Russian Army, (GABTU), stated on several occasions that this was the primary reason for their failures and problems. Tanks which should have taken six hours to prepare for combat now took seven to nine days, and frequently suffered failures of key systems shortly afterward (cooling being the number one problem with the T-72s and BMPs). Improperly stored batteries — another major weakness of Soviet-era tanks, as there were never enough of them around for proper rotation and stowage — also died quickly, forcing the troops to replace them under very trying conditions.

The T-80BV tanks used by the "Maykop" Brigade had no explosive plates in their reactive armor boxes (actually just a protective shield over the 4S20 explosive plates), and as a result had no chance against skilled Chechen antitank teams firing down on them from buildings. The image of a T-80BV, with a few boxes still visible on its glacis, blown completely apart near the train station in Groznyy sums up the total waste of the attacks by these forces and units. Whether they were stolen —– or simply not installed as nobody thought to do that — is anyone's guess. The vehicles were also using "Winter" fuels, with a shot of naphtha added for thinner to ease flow and starting, which caused the diesel fuels to ignite much more readily when hit by HEAT projectiles.

To comment on CPT Geibel's quote that prior to Chechnya-2, ERA plates were removed from T-72BM or T-90S tanks and sold on the "Black Market," he does not appear to understand how the ERA they use differs from the circa 1983 ERA version used in Chechnya-1. The T-72BM, T-80U, and T-90S tanks use what the Russians call "Built-In Reactive Dynamic Protection." This is a newer design of reactive armor, fully integrated into the design of the tank, which can defeat both HEAT and sabot projectiles. The T-72AV, T-72BV, T-64BV, and T-80BV all use "Attached Reactive Dynamic Protection," which is attached to studs welded to the outer surface of the tank. In most cases, commanders had the studs and boxes mounted on the tanks, but the 4S20 plates were stored separately, not to be issued and mounted except in case of war. It is very difficult, if not impossible, for troops to remove the ERA plates from either a T-72BM or T-90S to sell those items.

Over the course of the war, the Russians solved most of their command and control problems and tried to provide additional training for the soldiers who would fight in Chechnya. The only solution they found for using tanks was to avoid using them in city conditions unless they had sufficient infantry to provide protection. One tactic they did use with success was the "Fire Carousel." The T-72, and the T-80 as well, are very good when their autoloader is working, but very tedious and awkward to use without it or when the ammunition carousel goes empty. It can take up to 45 minutes to reload a T-72's 22-round carousel, and until that point in

time, the tank is relatively helpless. This tactic saw them bring up one tank at a time — keeping it head-on to the Chechens to prevent shooting down on the tank — and firing up all of the 22 rounds in the autoloader. When the tank went "dry," it would reverse out of position and a new tank with a full load would move up to take its place. Using this tactic, the Russians were able to clean out nests of Chechens with success, but were still limited by the 45 minutes each tank would be out of action when empty.

T-62s began to be issued to troop units at the end of Chechnya-1. The reason for this was simple. These tanks had proven themselves in Afghanistan and were far better for the types of conditions found in Chechnya. They had been the last tanks to undergo a full depot rebuilding. (This is due to the fact that they were around 20 years old. A Soviet regulation called for this with all serviceable tanks to extend their life as reserve tanks for another 20 years. Each tank received a completely new engine, suspension components, tracks, electronics, and upgrade items such as laser rangefinders, BDD armor applique packages, and in a very few cases, the 1K13 sight and 9M117 "Sheksna" missile system.)

The T-62, with its five-speed manual transmission and lower stressed engine, was found to be superior in the mountains over the T-72 with its seven-speed and turbocharged diesel. However, these tanks did have their limits and were not a total panacea. They did have the advantage of a fourth crewmember, making self-repairs easier and also providing another set of eyes to keep watch on the Chechens. The BDD armor, consisting of varying types of plates encased in a resin matrix and a ceramic filler inside the turret "eyebrows," was capable of dealing with all of the HEAT weapons used by the Chechens except captured RPO "flamethrowers."

A word on the RPO, which has come to the fore in Chechnya as a particularly nasty and brutally effective weapon. The Russians call it a "flamethrower" but it is more accurately described as a "volumetric" weapon, a class of weapons which use expanding gases or aerosols to cause their effects. The RPO is a "thermobaric" weapon; thermobarics are essentially slow-burning explosive slurries that compound the damage they cause in three ways. First, they burn very slowly for an explosive, causing much greater dwell times of their explosive impulses on a target. (To give a comparison from nuclear training, the human body can take an instantaneous overpressure of about 200 psi and survive; but as little as 15 psi over a longer time crushes the vital organs and kills the victim. This longer "dwell" is the first killer factor in thermobarics.) Second, the burning plasma cloud can penetrate even the smallest cracks and enter inside a vehicle or other stationary object, such as a house or pillbox. Finally, when the slurry is totally consumed, the resulting vacuum causes a massive backblast which crushes nearly everything in the area. They have also been called "Vacuum Bombs" by the Chechens, who fear them for the damage they can cause. They are quite dangerous to armored vehicles, as they can penetrate the engine bays or via NBC filtration systems and cause havoc inside the fighting compartment.

The Second Chechen War ("Chechnya-2" in some areas) saw a great deal of changes in Russian planning, thinking, and training. First off, the decision was made that no unit would deploy to Chechnya until it had completed six months' training (one training cycle). What many people forget is that on the still-in-force Soviet two-year conscription cycle, only 50 percent of a unit is truly trained and deployable at any one time. Twenty-five percent are in each cycle; the 1st cycle is too new and the troops in the 4th cycle (e.g., the one prior to release) are usually either too close to release to be effective or, in the case of Chechnya, already gone. (To ensure a desire to serve, troops in Chechnya receive two days' service credit for each day in Chechnya; ergo, some troops can complete their two-year stint in 15 months.)

Few of the units cited by CPT Geibel deployed in full measure to Dagestan or Chechnya-2. Due to their lessons learned from Chechnya-1, only part of a unit's tanks was actually taken into the republic in comparison with unit TO&E strengths. The main difference in Chechnya-2 was the fact that tank crews had trained together, and were using the tank they trained on. This provided a much better chance for survival as well as better combat performance.

Still, the main problems with Russian training — another Soviet-era holdover — remained. Troop training, even for Chechnya, was done in a *pro forma* style which did not train crews to function in new situations or when left to their own devices. Maintenance skills were still poor, and readiness rates were not as high as they should have been. Also, sergeants were identified based on either schooling or estimated levels of ability, and were not fully trained NCOs in the American mold. Whereas a U.S. soldier may take four years to make sergeant E-5, the Russians were appointing them after only a period of time as little as 12 weeks. Also, junior officers were in critically short supply; no one wanted to serve in Chechnya, and those who went in many cases were conscripted out of college for a two-year active duty stint. Their experience and knowledge were no higher than their troops, which given the lack of a true NCO corps, placed all of them at risk.

Innovations were tried to minimize losses. One of these was the concept of "Reconnaissance Fire Operations," an outgrowth of the Cold War-era "Reconnaissance Fire Complex" and the "Reconnaissance Strike Complex." In this tactic, all of the fire support assets — missiles, rockets, artillery, helicopters, and fixed wing aircraft — are coordinated by a single authority and used to first isolate enemy forces and then destroy them. Tanks were used in this manner to assist in the cordoning operations, but did not participate in the destruction by fire of the enemy. The new rule of thumb for Russian commanders is that if you find yourself in small arms range, then you have failed to carry out the tactics correctly.

While losses among the Army units have been far fewer, casualties overall have been about the same. Chechnya-1 saw the Russians take 57,000 casualties — 5,500 KIA or died of wounds, 16,000 WIA, and 35,000 sick or injured. LTC (Ret.) Les Grau of the Foreign Military Studies Office at Fort Leavenworth has a 900-page study on the history of the 40th Army in Afghanistan which he is painstakingly translating into English; the main problem the Soviets suffered from in Afghanistan was, as in Chechnya-1 and -2, sickness and ill health caused by poor field sanitation and support. Casualties in Chechnya-2 are less reliable at the moment, but from all published reports, they appear to have taken in excess of 4,300 KIA, 13,000 WIA, and an average of 40 personnel a day diagnosed with various illnesses or injuries.

CPT Geibel has glossed over the main problem suffered by Russian tankers in Chechnya-2, namely remote-controlled mines. Few pitched battles with armor have taken place in this war. As a result, the Chechens have discovered the only way to defeat them is with remote-controlled explosive devices, such as a 152mm projectile buried in a road, as they have rarely been able to close to RPG range. They have also discovered that if you shoot a Ground Forces or VDV soldier, artillery and aircraft will visit the nearest village and flatten it. If you shoot an MVD soldier, he just dies. More casualties are now being taken by the MVD Internal Troops and Militia (police) than by the Army.

The Russian Army is also unlikely to see some of its wishes fulfilled in the near future (through 2005-2010). CPT Geibel's statements on missile developments are essentially true, but in the context of their priorities for the Armed Forces, unlikely to be seen by Russian soldiers. Few of the tanks being used in Chechnya have through-the-tube missile capability due to a number of factors. First is the cost; only about 1 in 3 Soviet-era tanks were ever assessed to have it (there were more B1 versions of the T-64, T-72, and T-80 than B versions; the Bs have the missile capability, the B1s do not). Secondly is the training problem, and few gunners are proficient on their weapons now without adding the additional load of missile flight control. Lastly, they do not have the personnel to fix and maintain these systems, and thus cannot handle the extra materiel problems caused by new equipment.

As they see local wars and regional conflicts being their main problem, the new tanks forecasted are also unlikely to come

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into service. The T-90S is only a slightly improved T-72BM (renamed for overseas sales after the disastrous performance of the T-72 in Iraq, and a desire to disassociate the much different T-72B from the T-72s and T-72M/M1 tanks destroyed by the Coalition), and not a quantum leap forward. "Black Eagle" is also of a similar concept — still optimized for sweeping tank battles in Europe, not infantry support in the mountains. The much ballyhooed "T-95" has been promised to appear at two arms shows but is still missing, so the jury remains out on what it brings to the problem of city combat.

For those readers who also read Russian, there are two good books which cover much of the change in Russian thinking since 1992 and the whys behind it. They are *Russia (USSR) in Local Wars and Regional Conflicts During the Second Half of the 20th Century* and *The History of Russian Military Strategy,* both edited by Major General Vladimir A. Zolotarev, Academic of the Russian Academy of Natural Sciences and head of the Military History Institute (IVI). They are published by "Kuchkovo Polye" Publishing Company, Moscow, and are available from East View Publications for $39.95 each plus $6.50 shipping and handling. Les Grau and I have agreed to translate them, as all U.S. Army officers need to read these two excellent omnibus works on the past and present of the Russian Army, but thus far we have not received either permission from the Russians or found a publisher.

CPT Geibel means well, but too often the "shotgun" presentation of anecdotes without context can cause serious problems to become myths. Once the myths are embedded in commanders' minds, it is very hard to chase them out with the truth.

STEPHEN L. "COOKIE" SEWELL
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Aberdeen, Md.

CPT Geibel Responds

Fellow *ARMOR* readers:

I'll keep this short. I congratulate Stephen Sewell on stepping up to the plate and sharing his information with *ARMOR's* readers. While I acknowledge Sewell's years of experience and his current access to information, I stand by every word I wrote. My sources "are what they are" — the open-source words of Russian tankers and journalists, as printed. I presented diverse accounts to the *ARMOR* community in a logical, readable manner.

... "Cookie" misinterpreted some items, so I'll address his problems in sequence.

* All of the "anecdotes on failings" are about Chechnya-2. Don't know where one could think they apply to Chechnya-1.

* On dismantling different kinds of ERA blocks — never underestimate criminal intent. In Footnote 2, third paragraph, I direct you to the verb "may be" — the issue is pilferage, which is NOT technology-specific. "Cookie" and I could argue for hours whether an ingenious, thirsty Russian tanker could remove the explosives from a Kontakt-5 block and sell it on the black market, but I've got $20.00 that says Ivan could.

* As for the strength of units deployed during Chechnya-2, that's why I gave readers tank counts — anyone slightly familiar with Russian TO&E will take one look at them and see the units aren't up to strength. Why be verbose and insult readers' intelligence?

* Regarding my 'glossing over Command Detonated Mines,' the issue was addressed earlier. (See *ARMOR,* Nov-Dec 2000, Page 24, 1st column, last paragraph, and Page 26, 1st column, last paragraph.)

"Cookie's" misinterpretations aside, the bottom line is that Russia's armor fleet is in a place where we, as American armor/cavalry crewmen, do not want to be. Space in *ARMOR* magazine is at a premium, so if "Cookie" Sewell — or others — wish to discuss this topic further, they can always feel free to contact me at ACARLG@AOL.COM.

ADAM GEIBEL
CPT, AR
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Some Cavalry Problems Stem from 1986 Reorganization

Dear Sir:

I wish to comment on CPT Benson's article, "The Cavalry Paradigm," in the July-August issue. The author has done a fair crosswalk and identified various disconnects, but I suggest an adjustment of focus is needed to more clearly identify the problems and to assign responsibility for correction. The bottom line is that Armor Center and TRADOC need to reestablish the Directorate of Evaluation and Standardization (DOES), but more on that at the end.

DOCTRINE. Cavalry doctrine is not broken. It is generally adequate as stated in *FM 17-95.* It addresses in broad terms the role of cavalry organizations. Doctrine is not intended to be all-inclusive, since that would be too voluminous and restrictive, stifling all initiative.

Economy of force is a role and not a mission. Nobody is ordered, "conduct an economy of force." The mission order is something like "attack and seize" or "defend in sector," etc. Cavalry organizations are suited for "economy of force" operations because they are already organized as highly mobile combined arms units. Instead of having to cross attach and task organize tank, infantry, and supporting units into an *ad hoc* company team or battalion task force, the brigade or division commander can simply assign a complicated mission to his organic cavalry squadron or troop.

The mission profile chart in *FM 17-95,* Fig. 1-4, is a guide. Cavalry *missions* can be assigned to tank and infantry units. If needed, supporting units like military police, engineers, chemical, and any other unit that can move, communicate, and shoot can be pressed into service. The lack of cavalry units does not excuse the commander from assigning recon and security missions. Conversely, tank, aviation scouts, and other platoons and companies need not be included in detailed mission profiles since they are already collectively included within their parent cavalry troops, squadrons, and regiments. When reinforcing cavalry units, regular tank and infantry units are not retrained and reorganized, but are employed in their existing roles in support of the cavalry's mission.

The term "reconnaissance in force" is significant in that it denotes *at least* a battalion-size operation (*FM 17-95,* Chapter 3, Section V). The participating squadrons and troops are actually conducting zone recon and/or movement to contact, while the platoons are likely conducting travelling and bounding overwatch or fire and maneuver.

FM 17-95, Chapter 5, is very clear on deliberate and hasty attacks. The former is generally avoided but the latter is performed often to disrupt the enemy and seize the initiative. It is a mistake to suggest that cavalry must avoid attacking. Instead, cavalry must avoid *becoming decisively engaged* and losing its ability to maneuver.

If there is disagreement between *FM 17-95* and the cavalry MTP and ARTEP manuals, the latter need to be corrected (the responsible agency is the Directorate of Training and Doctrine Development). The FM is the primary document on which the others are based, and not the other way around.

EQUIPMENT. The author hits the nail on the head concerning a dedicated pure recon vehicle. No such system has ever existed, nor is one likely in the future. The role of cavalry is far too diverse, and combined arms operations are the norm.

TRAINING. Here, the author misses the mark. Company and field grade officers are, generally, not the problem. If the divisional cavalry squadron is poorly trained and misused, it is the fault of the division commander. If brigade commanders misuse divisional cavalry troops OPCONed to them, it is the division commander's responsibility to correct them. If brigade recon troops are assigned inappropriate tasks, it is the brigade commander's fault. Establishing an O-6 "Chief of Cavalry" at Fort Knox to tell brigade and division commanders that they are making mistakes in the field will do nothing. Instead, Armor Center, TRADOC, and FORSCOM need to examine "Leader Development" for senior leaders. Professional development does not end once stars are pinned on.

However, I must back up and emphasize that the author's concerns are anecdotal and I have no way of judging their true validity and scope. Are these really Army-wide problems, or just one or two training exercises that went a bit wrong? Well, that sort of issue used to be covered at each proponent school by the Directorate of Evaluation and Standardization (DOES). The true purpose

of DOES was to keep an eye on the state of the branch as it operates in the field. Unfortunately, under TRADOC's "School Model – 86" reorganization, DOES was denigrated to little more than monitoring of institutional training and was subsequently disbanded altogether in the early 1990s. With that decision, TRADOC proponent schools severed their linkage with the field and have never been adequately resourced to stay in touch.

Bringing back DOES should be the highest priority for all TRADOC proponent centers. Until then, nobody will understand the scope of the problems, let alone develop timely solutions.

CHESTER A. KOJRO
LTC, AR, USAR (Ret.)

Armor Junior Officer Says He's Right Where He Wants to Be

Dear Sir:

Having just read LTC Jim Pasquarette's article, "Some Thoughts for Junior Officers on Making a Career Decision," I must say that I agree with everything he wrote with one exception. I do not believe that LTC Pasquarette's reasons for making the Army a career 'sound ridiculous to the average junior officer' at all. Having been recently commissioned a 2LT in Armor and still waiting to start OBC, I am just about the most junior of any officer out there. There is no other career in the world that I would rather have than serving in the Army, and no other branch in which to serve than Armor. LTC Pasquarette's words really hit home with me as I hope they did with my fellow junior officers.

JIM MCCARTEN
2LT, AR

Tank-busting Is Only a Part Of Armor's Battlefield Mission

Dear Sir:

The letter from Mr. Harry Roach in the Jul-Aug '01 issue of *ARMOR* posed the interesting question, "Has the tank reached the apogee of its historical cycle?" It's very possible that future battlefield technology may lead to a radical evolution in armor branch in the 21st century, as Mr. Roach suggests. But he veers wide of the mark in his illogical conclusion to the story of how the railroad industry failed: because its executives thought they were in the railroad business and failed to recognize they were really in the transportation business. Harry Roach concludes that force developers must consider the evolution of armor in the sole context of being in the "tank-busting business."

This statement reveals a grave miscomprehension of the role of armor on the modern battlefield. The role of armor is shock, firepower, and mobility. Any peasant with an anti-tank rocket can "bust" a tank, but only armor units give the battlefield commander the decisive firepower and maneuver capability offered by today's tanks.

The tank's futuristic replacement may indeed be a very different piece of equipment: perhaps a hybrid descendent of the Abrams tank and the Apache helicopter, or a flying saucer with a ray gun, or the armored suits of Robert Heinlein's *Starship Troopers.* But whatever the Army develops won't come from thinking of armor branch as being in the "tank-busting business."

Armor will still be in the business of providing shock, firepower, and mobility on any future battlefield.

CHARLES E. RITTENBURG
MAJ, MI, USAR, (Ret.)

Where Did All the Horses Go When the Horse Cavalry Disbanded?

Dear Sir:

I wish to provide some information related to the query by Gordon Douglas (Page 49, July-August edition): "What happened to all the horses, stud farms, and saddles/bridles/harness?"

My father, a lifelong horseman, has told a story over the years of attending an auction at the Cavalry Remount Station in Front Royal, Va., near Washington, D.C. (He describes the Remount Station as a large complex of barns, paddocks, and pastures. I expect by this time it is covered with town houses.)

The sale occurred sometime in 1941. Dad remembers that horses were openly offered for sale to all bidders, but couldn't remember if they were sold individually or in lots. He describes the horses being sold as "heavy," "medium," and "light," making a clear distinction between the heaviest draft animals, lighter artillery teams, and cavalry horses. It is not clear how successful these horses were as riding and plow horses. Dad said they were all "trained to charge" and once they got their head, they would "run away" and "couldn't be stopped." Dad's opinion is that these "civilianized" horses were pretty much "used up" within less than a dozen years, either being worn out on the many farms still using real "horse power" or as dog meat.

Based on the quantity of McClellan saddles and other tack in evidence in museums, antique shows, farm auctions, and in the hands of collectors, it is a reasonable assumption that this equipment was also auctioned off when the horse cavalry was disestablished. While Dad has no direct memory of how the equipment was disposed, we have certainly owned and used a lot it over the years. While growing up in then-rural Maryland, I recall that almost every farm seemed to have at least one McClellan saddle hanging in a barn serving as a foundation for a bird nest. Dad once acquired about 300 lbs. of old tack with a $.25 auction bid — enough to fill the trunk of his car.

Digging through this treasure, my brother and I were thrilled to discover bridles, bits, and other tack clearly marked "U.S." To this day, I still own a McClellan saddle and a bridle, proudly displayed in my office while on active duty. There are also stories heard over the years that the Army burned large amounts of cavalry equipment just to get rid of it. This would be consistent with our dumping of massive amounts of equipment into the ocean at the end of WWII and burying every manner of equipment as we departed Vietnam. "Excess," it seems, will always be with us.

I hope that these tidbits of information are of interest to all cavalrymen and serve to document details of the end of the horse cavalry era now fast fading from memory.

Garry Owen!

GEORGE E. MAUSER
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Could Tracked Howitzers Fulfill a Dual Purpose Role?

Dear Sir:

I would like to put in a suggestion supporting the M113 APC as the proper vehicle for the Interim Armored Vehicle (IAV) program. It exists in large numbers. It has excellent logistics support and a wealth of experience on conversions. Experience with fiscal realities should indicate how the LAV III will be funded: remember the M8 Armored Gun System.

To get some kinetic energy weapons into service, one could use some of the many M109 self-propelled howitzer (SPH) vehicles. [We could] replace the existing 155mm howitzer with a M68 105mm tank gun, retaining the howitzer's elevation limits and add tank gunner/night vision gear while retaining the artillery fire control equipment.

This dual-purpose antitank/artillery vehicle is "portable" enough to get to the action, along with the M113s, in C-130s. Ammo for 105mm guns is readily available worldwide. Use 105mm howitzer HE shells for artillery purposes. The Navy "trick" of using reduced propellant charges will allow the gun to be used as a "howitzer" with greatly-reduced barrel wear. Armor is comparable to the M113, and can be upgraded to M113A3 level as needed. Add grab rails topside to allow troops to ride the vehicle — providing more mobility for airborne troops who would otherwise be on foot.

This proposed conversion is no panacea, but it may be available relatively *soon* and at much *lower* cost than an entirely new vehicle. My viewpoint on such conversions was learned as a naval architect in a Navy yard where *conversions* allow one to continually upgrade existing vessels to gain increased capabilities.

GORDON J. DOUGLAS JR.
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